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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,307	09/09/2003	Michiharu Yamamoto	NDTCO.022A	2141

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EXAMINER

KUGEL, TIMOTHY J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,307

Applicant(s)

YAMAMOTO ET AL.

Examiner

Timothy J. Kugel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 3-12 and 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: machine translation of JP10-333195 cited on IDS.

DETAILED ACTION

1. Claims 1-24 are pending as filed on 9 September 2003. Claims 3-12 and 15-24 are withdrawn from consideration

Election/Restrictions

2. Applicant's election without traverse of Group I, claims 1, 2, 13 and 14 and the species of formula (iii) in the reply filed on 19 May 2005 is acknowledged.
3. Claims 3-12 and 15-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 19 May 2005.

Information Disclosure Statement

4. The reference to US Patent Application No. 10/133,330 in the information disclosure statement filed 25 September 2003 should now reference US 6,653,421 as the application has issued.

Oath/Declaration

5. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

Specification

6. The disclosure is objected to because of the following informalities: The name 'R. TWieg' should be 'R. Twieg' (Page 4 ¶6).

Appropriate correction is required.

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

8. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim that depends from a dependent claim should not be separated by any claim that does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1 and 2 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of U.S. Patent No. 6,534,198 (Uneo). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of Uneo fully encompass the more broadly claimed subject matter of the instant invention in an anticipatory manner.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

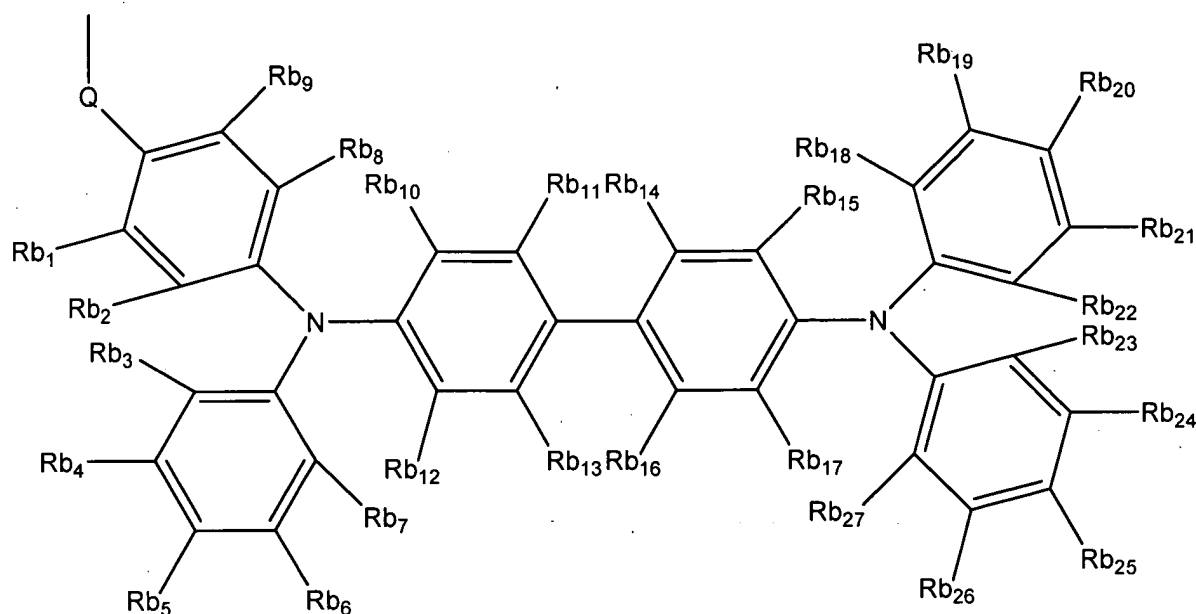
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 2, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,610,809 (Yamamoto '809)

Yamamoto '809 teaches a photorefractive composition comprising a polysiloxane polymer backbone (Column 17 Lines 4-8), with a side chain of the elected structure

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herein Q represents an alkylene group, with or without a hetero atom, such as oxygen or sulfur, and preferably Q is an alkylene group represented by $(CH_2)_p$, where p is an integer of about 2 to 6; and wherein Rb₁ -Rb₂₇ are independently selected from the group consisting of a hydrogen atom, a linear alkyl group with up to 10 carbons, a branched alkyl group with up to 10 carbons, and an aromatic group with up to 10 carbons (Column 10 Lines 1-25), wherein the polymer has a weight average molecular weight of about 3,000 to about 500,000, preferably from about 5,000 to 100,000 (Column 16 Lines 7-12) and the composition may include other components such as sensitizers and plasticizers (Column 9 Lines 21-27).

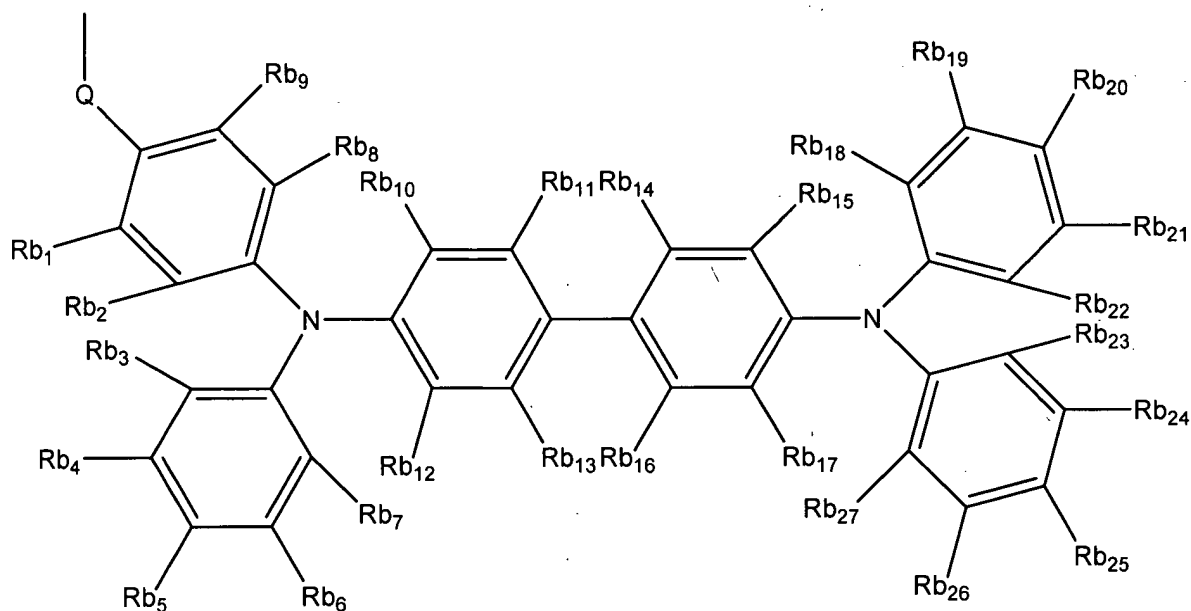
The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this

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application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

13. Claims 1, 2, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,953,421 (Yamamoto '421)

Yamamoto '421 teaches a photorefractive composition comprising a polysiloxane polymer backbone (Column 16 Lines 31-36), with a side chain of the elected structure



herein Q represents an alkylene group, with or without a hetero atom, such as oxygen or sulfur, and preferably Q is an alkylene group represented by $(CH_2)_p$; where p is an integer of about 2 to 6; and wherein Rb₁ -Rb₂₇ are independently selected from the group consisting of a hydrogen atom, a linear alkyl group with up to 10 carbons, a branched alkyl group with up to 10 carbons, and an aromatic group with up to 10 carbons (Column 10 Lines 1-25), wherein the polymer has a weight average molecular weight of about 3,000 to about 500,000, preferably from about 5,000 to 100,000

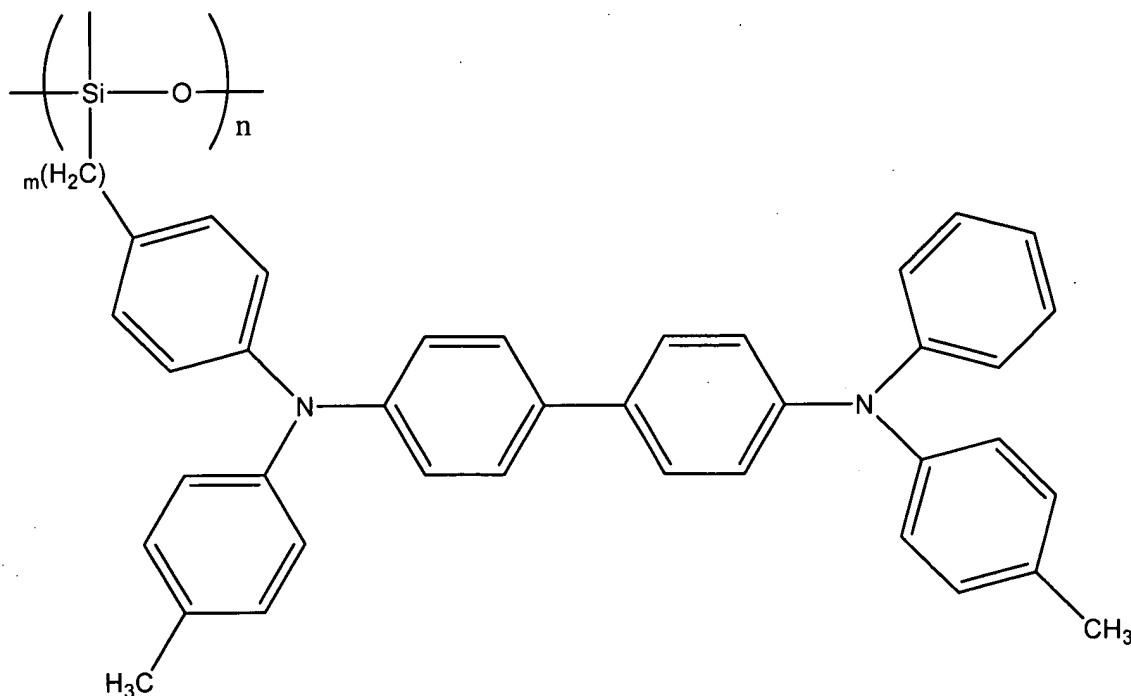
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(Column 15 Lines 49-55) and the composition may include other components such as sensitizers and plasticizers (Abstract, Column 2 Lines 2-7, Column 8 Lines 65-67).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

14. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,534,198 (Uneo).

Uneo teaches an electroluminescent device comprising a silicon compound of



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wherein m is an integer of 2 or more and n is an integer where $2 \leq n \leq 5,000$ (Claim 9, Column 2 Line 65 – Column 3 Line 26 and Column 43 Lines 36-46).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

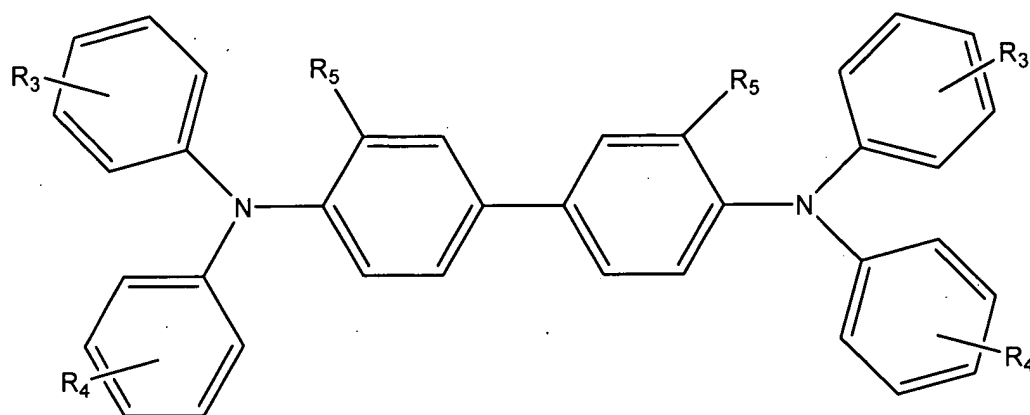
16. Claims 1, 2, 13 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Woong Sang Jahng et al., Synthesis and Characterization of Hole-transport Materials in Polysiloxane, *Mat. Cryst. Liq. Cryst.*, Vol. 377 pp. 329-332 (Jahng) in view of Japanese Patent 10-333195 (Hisaya), US 2,774,697 (Koblitz) and applicant's admission. Jahng is an X-type reference cited on the International Search Report of PCT/US2004/023504, which is a continuation of the instant application.

Jahng teaches hole-transporting polysiloxane polymers with pendant triphenylamine groups (All).

Jahng does not disclose expressly the elected pendant group.

Hisaya discloses a photorefractive material composition comprising a polymer with pendent groups of the formula

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wherein R₃ is

H, p-Me, p-Et etc.; R₄ is H, m-Me, p-Me, p-Et, o-Me etc.; and R₅ is H, Me etc (Abstract, ¶0009, Formula 2).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the pendant group of Hisaya on the polysiloxane backbone of Jahng. The motivation to do so would have been to improve the speed of the photorefractive response (Hisaya ¶0004).

Jahng does not disclose expressly the use of a plasticizer.

Koblitz discloses the use of a plasticizer in polysiloxane compositions (Column 3 Lines 8-11).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the plasticizer of Koblitz in the composition of Jahng. The motivation to do so would have been to improve the flow of the composition.

Jahng does not disclose expressly the use of sensitizers, but applicant admits that the addition of sensitizer materials is known in the art (Disclosure Page 2 ¶3).

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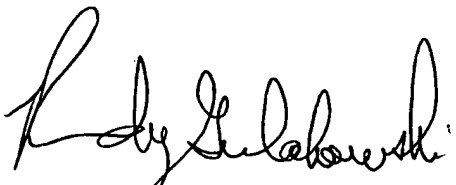
Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJK
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